



WASTE MGMT. DIV.
JAN 11 10 42 AM '99

January 8, 1999

Mr. John Schmeltzer
Sites Management Section
VTDEC WMD
103 South Main St./ West Bldg.
Waterbury, VT 05671-0404

RE: December 1998 Initial Site Investigation at Giroux Body Shop, Hinesburg
Vermont (VTDEC Site # 98-2480)

Dear Mr. Schmeltzer:

Enclosed please find the December 1998 site investigation report for the above referenced site. Mr. Steve Giroux of Giroux Body Shop requested that a copy be forwarded to you for review. Please do not hesitate to call, if you have any questions or comments.

Sincerely,

Robert Higgins
Engineer

Enc.

cc: Mr. Steve Giroux, Giroux Body Shop (w/out Enc.)
GI #109841393

**INITIAL INVESTIGATION OF
SUBSURFACE PETROLEUM CONTAMINATION AT
GIROUX AUTO BODY SHOP**

DECEMBER 30, 1998

Site Location:

**Giroux Auto Body Shop, Inc.
Route 116
Hinesburg, VT**

**VTDEC SITE #98-2480
GI Project # 109841393**

Prepared For:

**Mr. Steve Giroux
Giroux Auto Body Shop, Inc.
Route 116
Hinesburg, VT 05461**

(802) 482-2162

Prepared By:



P.O. Box 943 / 19 Commerce Street Williston, VT 05495 (802) 865-4288

JAN 11 10 42 AM '99

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I. INTRODUCTION

This report summarizes the initial investigation of suspected subsurface petroleum contamination at Giroux Auto Body Shop located on Route 116 in Hinesburg, VT (see location map in Appendix A). This investigation was conducted by Griffin International, Inc. (Griffin) for Giroux Auto Body Shop, Inc. (Giroux), to address petroleum contamination detected during subsurface drilling activities which were conducted on August 10, 1998 in relation to the installation of new municipal water lines. The Vermont Department of Environmental Conservation (VTDEC) requested that this work be completed in a letter to Mr. Victor Giroux of Giroux Auto Body Shop, Inc., from Mr. John Schmeltzer of the VTDEC, dated October 5, 1998. The site (VTDEC Site #98-2480) is owned by Giroux Auto Body Shop, Inc., of Hinesburg, VT.

Work conducted at the site included the installation of four groundwater monitoring wells, the collection and laboratory analysis of groundwater samples from these new monitoring wells, and the collection and laboratory analysis of one water sample from the on-site supply well. In addition, a sensitive receptor risk assessment was conducted to assess the risk that subsurface petroleum contamination at the site may pose to potentially sensitive receptors identified in the site vicinity. Work has been conducted in accordance with Griffin's Work Plan and Cost Estimate for Initial Site Investigation at the Giroux Auto Body Shop dated October 16, 1998. The Work Plan was approved by John Schmeltzer of the VTDEC in a phone conversation with Griffin in November, 1998.

II. SITE BACKGROUND

A. Site History

Subsurface petroleum contamination was detected in soil and groundwater at the Giroux Auto Body Shop facility during subsurface drilling activities which were conducted on August 10, 1998, in relation to the installation of a new municipal water line along the west side of Route 116, in front of Giroux Auto Body Shop. A potential source of this petroleum contamination is related to two 1,000-gallon and one 2,000-gallon gasoline underground storage tanks (USTs) which were removed from the subsurface at the site in 1987 [1]. The USTs were located on the southeast side of the property between Route 116 and the building currently housing the Auto Motion Garage.

During the subsurface drilling activities on August 10, 1998, groundwater samples were collected from four temporary monitoring wells (WL1 - WL4 on Site Map, Appendix A) and submitted for laboratory analysis per EPA Method 8021B. Several petroleum compounds were detected in excess of the Vermont Groundwater Enforcement Standards (VGES) in the samples collected from WL2 and WL3. None of the compounds targeted by the analysis were detected in WL1 or WL4. For further information refer to the August 18, 1998 Griffin report *Limited Investigation of Potential Subsurface Contamination at Various Locations along Proposed Water Main Route in Hinesburg, Vermont* [2].

In compliance with a request from the VTDEC that additional work be conducted at this site, in order to determine the degree and extent of petroleum contamination, Giroux retained the services of Griffin to conduct this initial site investigation.

B. Site Description

Giroux Auto Body Shop is located on the southwest side of Route 116 in Hinesburg, VT (see Site Location Map in Appendix A). The area consists of commercial, residential and agricultural properties. The property is bordered by Route 116 to the east, a residence and Patrick Brook to the south, the Town of Hinesburg Fire Department and Pump Station to the north, and open fields and the LaPlatte River to the west.

There are four buildings on the subject property; Giroux Auto Body Shop, Auto Motion Garage, an apartment house, and a residence. The majority of the site is paved or occupied by these buildings.

C. Site Geologic Setting

According to the Surficial Geologic Map of Vermont [3], the site is underlain by lake bottom sediments. Soils encountered during monitoring well installation consisted primarily of medium gravel fill overlying fine sands, silt, and clay. Bedrock at the site is mapped as Winooski dolomite [4]; however bedrock was not encountered during this initial site investigation.

Based on visual observation and review of the USGS topographic map [5], groundwater in the vicinity of the Giroux site would be expected to flow to the west toward the LaPlatte River, following topographic contours.

III. INVESTIGATIVE PROCEDURES

A. Monitoring Well Installation

On November 16, 1998 four monitoring wells were installed by Adams Engineering of Underhill, Vermont using a Minirig vibratory drilling rig. Drilling and well construction were directly supervised by a Griffin engineer. Continuous soil samples were collected from each boring. Each soil sample was screened for volatile organic compounds (VOCs) using a PhotoVac Model 2020 Photoionization Detector (PID) equipped with a 10.6 eV bulb. Soils were screened using the Griffin Jar/Polyethylene Bag Headspace Screening Protocol, which conforms to state and industry standards. Contaminant concentrations and soil characteristics were recorded in detailed boring logs by the supervising Griffin engineer (see the Well Logs in Appendix B).

The monitoring wells (MW-1, MW-2, MW-3, and MW-4) were installed to help better define groundwater flow direction and gradient and the degree and extent of suspected petroleum contamination at the site. MW-1 was installed northeast of the former USTs in the presumed up-gradient direction. MW-2 was installed in the direct vicinity of the former USTs. MW-3 was

installed north of the former USTs location, in a presumed down or cross-gradient direction. MW-4 was installed west of the former USTs, in a presumed down or cross-gradient direction.

The monitoring wells were constructed of 1.5-inch diameter Schedule 40 PVC riser and 0.010-inch factory slotted, well screen. The length of the riser and the screened section of pipe varied depending on the depth of the well. With the exception of MW-1, the annulus between the well screen and the borehole was filled with a sand pack to just above the well screen. The borehole for MW-1 collapsed around the well screen. Therefore the bottom portion of the screened section of this well is surrounded by native materials. A bentonite seal was placed above the sand pack. To complete the construction of each well, a road box was set in concrete at grade level. In addition, locking well caps were placed on the monitoring wells. Specific well construction details are displayed in the detailed well logs included in Appendix B.

MW-1

The boring for MW-1 was advanced to 11 feet below grade. Soils from the boring from MW-1 consisted of damp, brown, medium gravel with silt and clay (i.e. fill) from 0 to 1 foot below grade. Damp, gray, fine sand with silt and some clay was observed between 1 and 4 feet below grade. Damp, gray, dense clay was observed from 4 to 11 feet below grade. Petroleum odors were not observed in the soils from this boring. Soil samples collected for PID screening did not contain detectable VOCs.

Groundwater was encountered at approximately 3 feet below grade. The screened section of the well was installed to seven feet below the ground surface, and the clay layer was not completely penetrated.

MW-2

The boring for MW-2 was advanced to 10 feet below grade. Soils from the boring consisted of dry, brown, fine gravel with some coarse sand (fill) from 0 to 3 feet below grade. Damp, black/gray, fine silt with fine sand was observed between 3 and 6 feet below grade. A highly plastic, damp, gray clay was observed from 6 to 10 feet below grade. Petroleum odors resembling weathered gasoline were observed in the soil samples collected between 3 and 10 feet below grade. Elevated VOC levels were detected using the PID, the maximum reading was 1,359 parts per million (ppm) at 4 feet below grade. Groundwater was encountered at 3.5 feet below grade.

MW-3

The boring for MW-3 was advanced to 10 feet below grade. Soils from the boring consisted of dry, brown, fine gravel and coarse sand (fill) from 0 to 1.5 feet below grade. Damp, black silt with fine sand and some clay was observed between 1.5 and 5 feet below grade. Soils between 5 and 10 feet below grade consisted of wet, gray, silt with clay. Petroleum odors resembling weathered gasoline were observed in the soil samples collected between 1.5 and 10 feet below

grade. Elevated VOC levels were detected using the PID; the maximum reading was 1,383 ppm at 4 feet below grade. Groundwater was encountered at 3.5 feet below grade.

MW-4

The boring for MW-4 was advanced to 13 feet below grade. Soils from the boring consisted of dry, fine, brown gravel with coarse sand (fill) from 0 to 2.2 feet below grade. Damp, black clay with some silt was observed between 2.2 and 3.2 feet below grade. Soils between 3.2 and 4 feet below grade consisted of wet, gray, fine silt with fine sand and some clay. Hard, damp, gray clay was observed between 4 and 7 feet below grade. From 7 feet to the end of exploration at 13 feet below grade, soils consisted of wet, plastic, gray clay. Petroleum odors were not observed in soils from this boring. No elevated VOC levels were detected using the PID except for a reading of 1.5 ppm in the sample collected from 0 to 2.2 feet below grade. Groundwater was encountered at 5 feet below grade.

B. Determination of Groundwater Flow Direction and Gradient

Water table elevation measurements were collected from all monitoring wells on November 25, 1998 using an MMCTM interface probe in the four monitoring wells. These measurements were subtracted from the top of casing elevations, which were determined relative to an arbitrary datum of 100 feet at the top of the casing for MW-3, to determine the water table elevation at each of the wells. Groundwater level data are recorded in Appendix C. No free phase petroleum product was observed in any of the monitoring wells gauged on November 25, 1998.

As displayed in the groundwater contour map included in Appendix A, the groundwater flow direction for November 25, 1998 was estimated to be to the southwest at a hydraulic gradient of approximately 2.7%. Under this groundwater flow regime, MW-1 is located up-gradient of the expected source area (i.e., former gasoline UST system), and MW-3 and MW-4 are located cross-gradient to down-gradient from the expected source area. Furthermore, it is apparent from this data that temporary well WL2 is located down-gradient to cross-gradient from the former location of the gasoline UST systems and WL3 is located in direct vicinity of the said potential source area.

C. Groundwater Sample Collection and Analysis

Groundwater samples were collected from each monitoring well immediately following well gauging on November 25, 1998. Samples were analyzed for the presence of VOCs per EPA Method 8260. Results of the laboratory analyses are summarized in Appendix D. Laboratory report forms are presented in Appendix E.

Concentrations of benzene, ethylbenzene, naphthalene, toluene, 1,2,4 trimethylbenzene, 1,3,5 trimethylbenzene and xylenes were detected in MW-2 and MW-3 at levels above the Vermont Groundwater Enforcement Standard (VGES) for each of these compounds. Isopropylbenzene and n-propylbenzene were also detected in MW-2 and MW-3. These compounds do not have

VGESs. The EPA's Region III risk based concentration for n-propylbenzene in tap water is 61 parts per billion (ppb) [6], and was exceeded in both MW-2 and MW-3.

The high ratio of xylene to benzene in the groundwater samples collected from MW-2 and MW-3 is characteristic of an older, weathered petroleum release.

None of the compounds targeted by EPA Method 8260 were found above detection limits in the groundwater samples collected from MW-1 and MW-4.

All samples were collected according to Griffin's groundwater sampling protocol which complies with industry and state standards. Results from the analyses of the duplicate samples indicate that adequate quality assurance and control (QA/QC) were maintained during sample collection and analysis. Traces of chloroform were detected in the laboratory analysis of the trip blank sample. Chloroform is frequently found as a byproduct of chlorinated water; the presence of chloroform in the trip blank may have its source in the laboratory water used in the preparation of the trip blank. Chloroform was not detected in any of the monitoring well samples.

D. Sensitive Receptor Risk Assessment

A receptor risk assessment was conducted to identify known and potential receptors of the contamination detected at Giroux Auto Body Shop. A visual survey was conducted during monitoring well installation. Based on these observations, a determination of the potential risk to identified receptors was conducted based on proximity to the expected source area (i.e., former gasoline UST systems), groundwater flow direction, and contaminant concentration levels in groundwater.

Water Supplies

Giroux Auto Body, the Auto Motion Garage, the on-site apartment building, and a residence, obtain water from a 200-foot bedrock supply well located approximately 100 feet south of the former gasoline UST systems. According to the Well Completion Report on file with the VTDEC [7], the surface casing for this well was grouted within a 10-inch diameter top hole approximately 15 feet into competent bedrock. This construction method effectively isolates the deeper, bedrock aquifer, targeted by this supply well, from the shallow overburden aquifer which is impacted by petroleum in the vicinity of Giroux Auto Body.

A sample was collected for laboratory analysis from the on-site supply well on November 25, 1998. This sample was analyzed for VOCs per EPA Method 8260. The supply well sample was non-detect for all of the compounds targeted by this analysis. Furthermore, based on the groundwater flow direction calculated for the site the supply well is cross-gradient to up-gradient from the source area with respect to the shallow groundwater aquifer. Therefore, the on-site supply well is believed to be at minimal risk.

Other buildings in the area are supplied by town water, which has its source from two supply wells. One supply well is located on Mechanicsville Road; the second is located on Cheese Plant

Road behind the Hinesburg Town Hall. Because of their relative distance from the contaminant source area at Giroux Auto Body, the environmental risk to these water supplies posed by the Giroux Auto Body site is considered minimal.

The reach of the waterline that passes through the Giroux Auto Body contaminant source area is comprised of ductile iron [8]. This material was used in this location because it is resistant to potential degradation caused by residual petroleum contamination. Furthermore, all joints of the water line within the reach that passed through the petroleum-contaminated source area were sealed with concrete. Therefore, risk of petroleum impact to the municipal water source via this reach of the utility line is considered minimal, based on currently available data.

Buildings in the Vicinity

Giroux Auto Body is one of four buildings located on the subject property; the others include the Auto Motion Garage, an apartment building, and a residence. Three of the on-site buildings are located down-gradient of the source area. Two of those buildings, Giroux Auto Body and the Auto Motion Garage are constructed on slabs, which minimizes potential risk of vapor impact to these buildings. The basement of the down-gradient apartment building was screened for VOCs on November 16, 1998, and no VOCs were detected. The fourth building, a residence constructed on a slab foundation, is located up-gradient of the source area, and is therefore considered to be at minimal risk of petroleum vapor migration.

Surface Water

The nearest surface waters to the site are Patrick Brook, which is located approximately 250 feet south of Giroux Auto Body Shop, and the LaPlatte River, which is approximately 1500 feet west of the site. The Patrick Brook is up-gradient of the source area, and is therefore considered at minimal risk of petroleum impact. The LaPlatte River is located down-gradient of the source area, and given its sufficient distance from the source area at Giroux Auto Body, it is not believed to be at risk of petroleum contamination. The level of risk to the LaPlatte River could be better determined if the down-gradient extent of the contaminant plume was defined.

Utility Corridors

The municipal water line recently installed along the eastern side of the subject property may act as a preferential pathway for groundwater flow (and therefore future contaminant migration) from the source area, as this water line is present at an elevation submerged beneath the groundwater table. Based upon groundwater data collected in August of 1998 from temporary wells WL1 through WL4 [2], dissolved contamination in a direction along the (then) proposed water line was limited to a position between WL2 and WL1. A low-permeability barrier to groundwater flow installed in this approximate position along this now installed water line would be reasonably effective to prevent future contaminant migration along this utility corridor.

IV. CONCLUSIONS

Based on the initial site investigation of petroleum contamination at the Giroux Auto Body Shop site, the following conclusions are offered:

1. Four shallow monitoring wells were installed in the site vicinity on November 16, 1998, to evaluate the degree and extent of subsurface petroleum contamination encountered in August 1998 during advancement of exploratory soil borings for the proposed water line on the eastern border of the site.
2. Adsorbed petroleum contamination was detected in soils collected from two of the four monitoring well boreholes (MW-2 and MW-3) on the east side of the Giroux Auto Body property. These wells are in the approximate location of the former gasoline USTs and dispenser system removed from the site in 1987. Soils from these boreholes exhibited a weathered gasoline odor.
3. Water table elevation data collected on November 25, 1998, indicate that groundwater in the overburden aquifer beneath the site flows in a ~~north~~western direction toward the LaPlatte River at a hydraulic gradient of 2.7%.
4. Groundwater samples from MW-2 and MW-3 (located in close proximity to the location of the former gasoline USTs and dispenser systems) were contaminated with petroleum related compounds. Concentrations of benzene, ethylbenzene, naphthalene, toluene, 1,2,4 trimethylbenzene, 1,3,5 trimethylbenzene, and xylenes were detected in MW-2 and MW-3 at levels above their respective VGESs.
5. None of the targeted compounds were present above method detection limits in the groundwater samples collected from MW-1 and MW-4.
6. The down-gradient extent of the contaminant plume has not been defined with the current well array.
7. No free product was present in the on-site wells on November 25, 1998.
8. The high ratio of xylene to benzene in the groundwater samples collected from MW-2 and MW-3 is characteristic of an older, weathered petroleum release. This finding would be consistent with a potential historic release(s) from the gasoline UST systems removed from the site in 1987.
9. Receptors in the vicinity of the site which have been identified as being at potential risk of impact from subsurface petroleum contamination are the water line (as a conduit for preferential, off-site contamination migration) and the down-gradient LaPlatte River. A low-permeability barrier installed in this approximate position along the now installed water line would be reasonably effective to prevent future contaminant migration along this utility

corridor. Risk to the LaPlatte River is considered limited at this time, given its sufficient distance from the Giroux Auto Body site; risk to this potential receptor can be better characterized once the down-gradient extent of the dissolved contaminant plume has been determined.

10. With the apparent source removed (i.e., the former gasoline UST systems), and barring the identification of an additional source, it is expected that, over time, the natural processes of dilution, dispersion, and biodegradation will reduce dissolved contaminant concentrations present in groundwater beneath the Giroux Auto Body Shop site.

V. RECOMMENDATION

Based upon the above conclusions, Griffin presents the following recommendations:

1. An additional monitoring well should be installed to better define the down-gradient extent of dissolved petroleum contamination emanating from the Giroux Auto Body site.
more from 12 well? - Geoprobe wells? - like 3?
Following installation of the additional monitoring well, groundwater samples should be collected from the new well and the four existing site wells and analyzed for petroleum-related constituents via Method 8021B. In addition, groundwater elevations should be gauged in each site-related well to prepare an updated groundwater contour map for the site. Results of the monitoring well installation and additional groundwater monitoring round will be presented in a summary report.
3. Because contaminant levels at the site were detected at concentrations greater than the VGES for several compounds, ongoing groundwater monitoring should be implemented at this site, to track the expected degradation of the petroleum contamination through time. An appropriate future monitoring frequency will be recommended following review of data from the second round of groundwater sampling/ analysis.
4. If it has not already been accomplished, an effective subsurface seal should be installed along the water line at a location approximately between WL2 and WL1 to prevent future contaminant migration along this utility corridor.

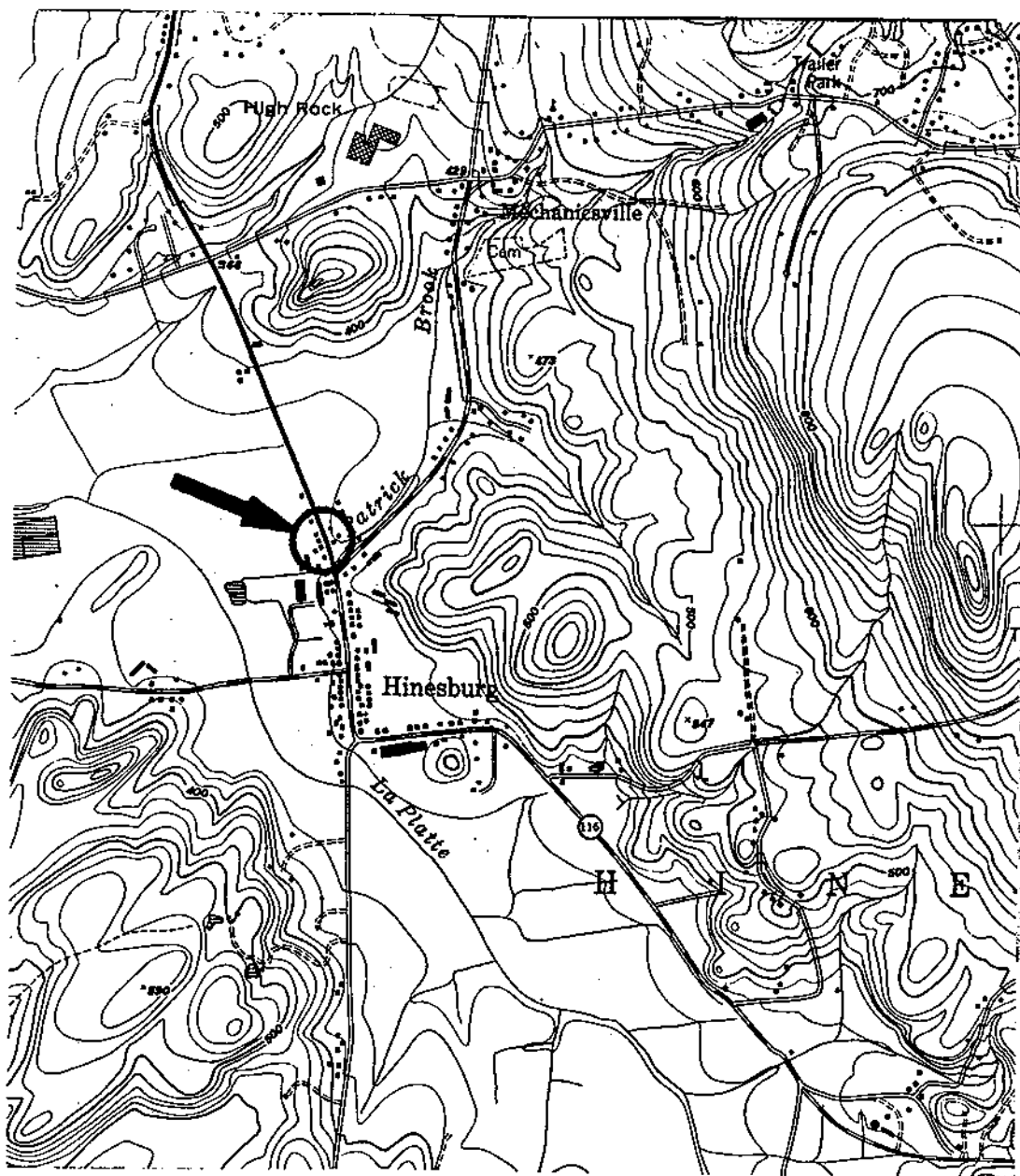
VI. REFERENCES

1. Vermont Agency of Natural Resources, Department of Environmental Conservation. October 23, 1987. Underground Storage Tank Permanent Closure Form, Giroux Auto Body Shop, Hinesburg, Vermont.

2. Griffin International. August 18, 1998. *Limited Investigation of Potential Subsurface Contamination at Various Locations along Proposed Water Main Route in Hinesburg, Vermont*. Prepared for the Town of Hinesburg.
3. Doll, Charles G., ed., 1970, *Surficial Geologic Map of Vermont*, State of Vermont.
4. Doll, Charles G., ed., 1961, *Centennial Geologic Map of Vermont*, State of Vermont.
5. USGS 7.5 Minute Topographic Quadrangle Map. 1948, photo-revised 1987. Hinesburg, Vermont.
6. Environmental Protection Agency. October 22, 1997. *EPA Region III Risk Based Concentrations*.
7. State of Vermont, Department of Environmental Conservation. August 22, 1990. Well Completion Report, Giroux Auto Body Shop, Hinesburg, Vermont.
8. Roger Ward, Phelps Engineering. August, 1998. Personal conversation with Robert Higgins, Griffin International.

APPENDIX A

Maps



OB #: 109841393

SOURCE: USGS- HINESBURG, VERMONT QUADRANGLE



GIROUX BODY SHOP INC.

ROUTE 116, HINESBURG, VERMONT

SITE LOCATION MAP

DATE: 11/19/98 DWG.#:1

SCALE: 1:24000 DRN.:SB APP.:RH

HINESBURG
AUTO SALES



RESIDENCE

GRAVEL

GRASS

GRAVEL

MW1

RESIDENCE

RESIDENCE

GRASS

RESIDENCE

PATRICK BROOK

ROUTE 116

MUNICIPAL WATER LINE

PAVEMENT

MW3

MW2

APPROX. FORMER LOCATION OF
(2) 1,000 GALLON AND (1) 2,000
GALLON GASOLINE USTs REMOVED
1997.

APPROX. LOCATION OF
EXISTING 1,000 GALLON
No. 2 FUEL OIL UST

MW1

APARTMENT
HOUSE

LEGEND

MW3

MONITORING WELL

WLS

APPROXIMATE LOCATION OF
TEMPORARY MONITORING WELL
INSTALLED 8/10/98

SW1

SUPPLY WELL

SD

STORM DRAIN

STELLA FORDS

GIROUX BODY SHOP INC.

AUTO MOTION

MW4

STORAGE AREA

GRAVEL

APPROX. LOCATION OF
EXISTING 2,000 GALLON
No. 2 FUEL OIL UST

APPROX. LOCATION OF (2)
EXISTING 4,000 GALLON
No. 2 FUEL OIL USTs

JOB NO. 100011000

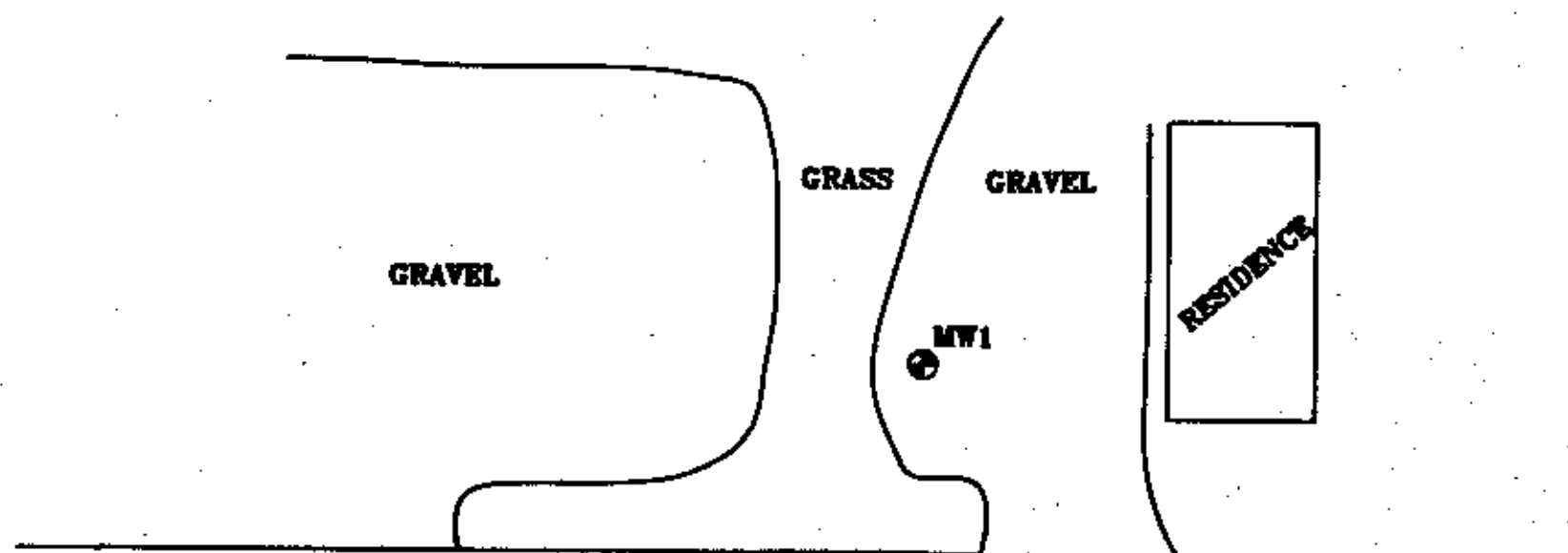


GIROUX BODY SHOP INC.

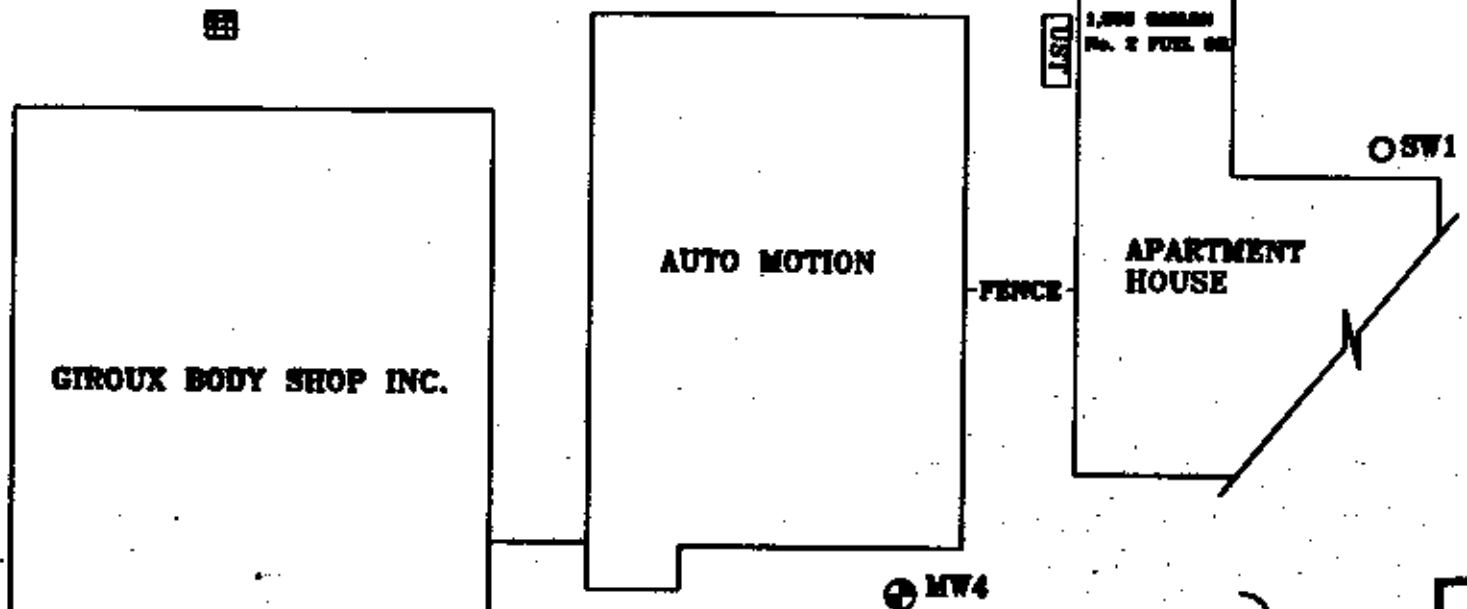
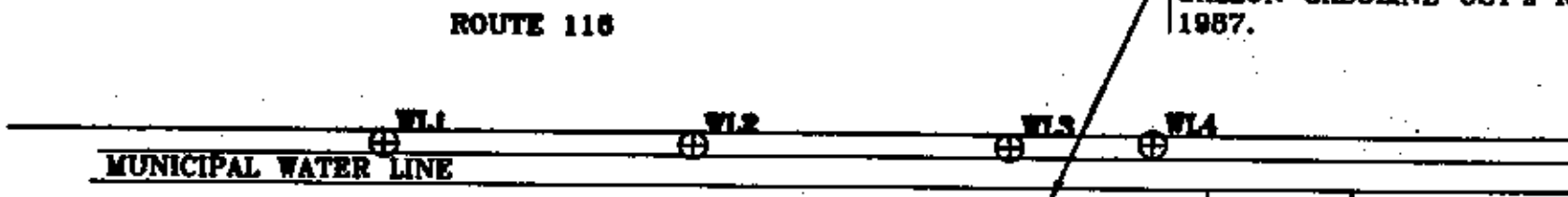
ROUTE 116, HINESBURG, VERMONT

AREA MAP

DATE: 12/1/98 DUC: S SCALE: NONE DES: EAF APP: BE



APPROX. FORMER LOCATION OF
(2) 1,000 GALLON AND (1) 2,000
GALLON GASOLINE UST'S REMOVED
1987.







UST
2,000 GALLON
No. 2 FUEL OIL

UST
1,000 GALLON
No. 2 FUEL OIL

STORAGE AREA

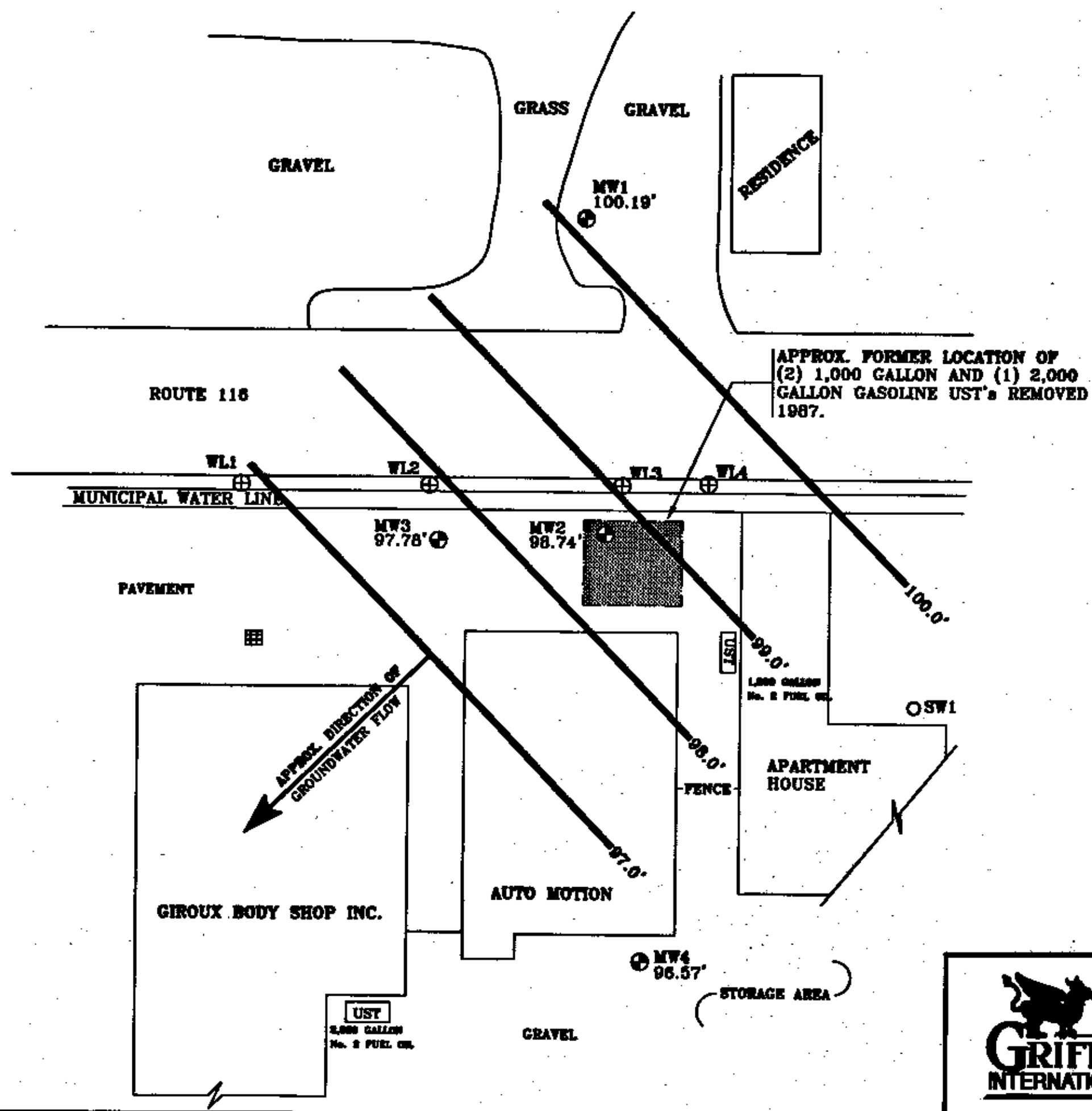
LEGEND

-  MW3 MONITORING WELL
-  WL2 APPROXIMATE LOCATION OF
TEMPORARY MONITORING WELL
INSTALLED 8/10/98
-  OSW1 SUPPLY WELL
-  STORM DRAIN



GIROUX BODY SHOP INC.
ROUTE 116, HINESBURG, VERMONT
SITE MAP

DATE: 12/09/98	DRAWN BY: S	SCALE: 1"=50'	CHECKED BY: SJB	APP'D BY: SJB
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LEGEND

- MW3 97.78' MONITORING WELL AND WATER TABLE ELEVATION IN FEET
- 99.0' GROUNDWATER CONTOUR IN FEET (DASHED WHERE INFERRED)
- WL2 APPROXIMATE LOCATION OF TEMPORARY MONITORING WELL INSTALLED 8/10/98
- SW1 SUPPLY WELL
- STORM DRAIN




FIG. NO. 100041200

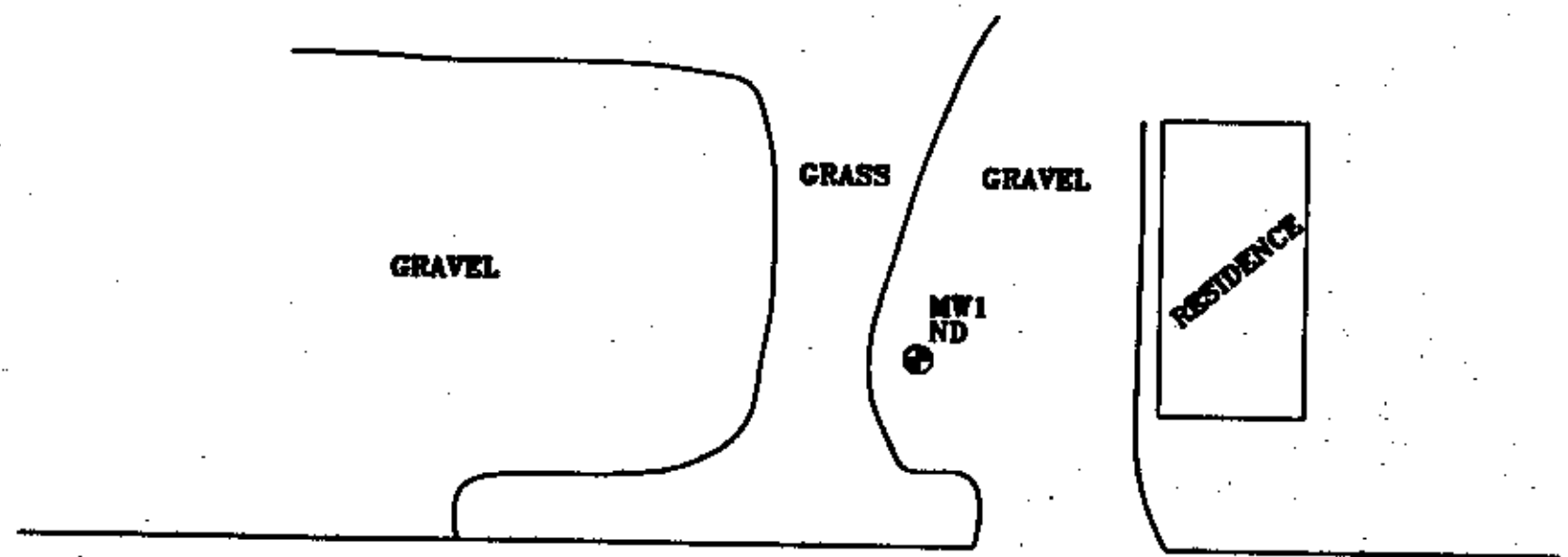
GIROUX BODY SHOP INC.

ROUTE 116, HINESBURG, VERMONT

GROUNDWATER CONTOUR MAP

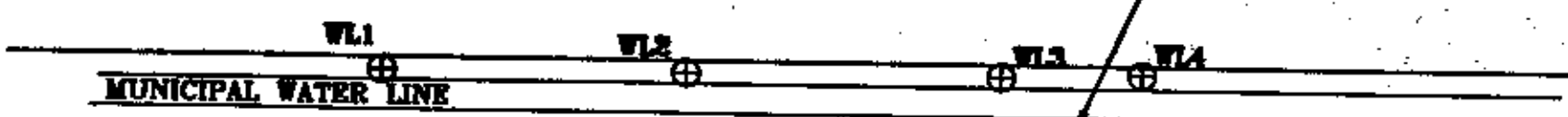
MEASUREMENT DATE: 11/25/98

DATE: 12/20/98	DWG. #: 4	SCALE: 1"=50'	DRW.: EJS	APP.: JHS
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ROUTE 116

APPROX. FORMER LOCATION OF
(2) 1,000 GALLON AND (1) 2,000
GALLON GASOLINE UST's REMOVED
1987.



PAVEMENT

MW3
35,963

MW2
41,926



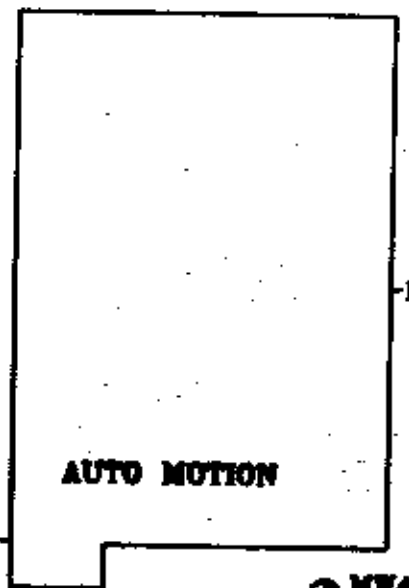
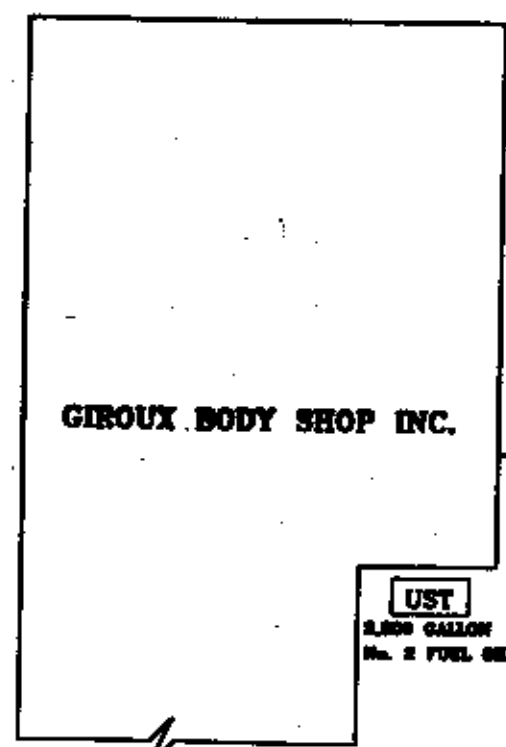
1,000 GALLON
No. 2 FUEL OIL

UST

SW1
ND

APARTMENT
HOUSE

FENCE








MW4
ND

STORAGE AREA

GRAVEL

UST
2,000 GALLON
No. 2 FUEL OIL

LEGEND

-  MW3 35,963 MONITORING WELL AND TOTAL VOC CONCENTRATIONS (ug/L)
-  ND NONE DETECTED
-  WL2 APPROXIMATE LOCATION OF TEMPORARY MONITORING WELL INSTALLED 8/10/98
-  SW1 SUPPLY WELL
-  STORM DRAIN



GIROUX BODY SHOP INC.
ROUTE 116, HINESBURG, VERMONT
CONTAMINANT CONCENTRATION MAP
SAMPLE DATE: 11/25/98

DATE: 12/23/98	BY: J. B.	SCALE: 1"=20'	DRAWN: SSB	APP: JBN
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APPENDIX B

Well Logs

PROJECT GIROUX BODY SHOP INC.

LOCATION ROUTE 116, HINESBURG, VT.

DATE DRILLED 11/16/98 TOTAL DEPTH OF HOLE 11.0'

DIAMETER 2.75"

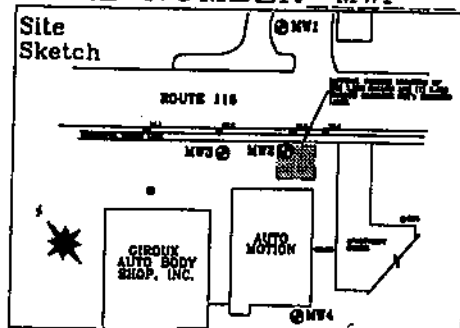
SCREEN DIA. 1.5" LENGTH 5.0' SLOT SIZE 0.010"

CASING DIA. 1.5" LENGTH 1.5' TYPE sch 40 pvc

DRILLING CO. ADAMS ENGR. DRILLING METHOD VIBRATORY

DRILLER GERRY ADAMS LOG BY R. HIGGINS

WELL NUMBER MW1



GRIFFIN INTERNATIONAL, INC

DEPTH IN FEET	WELL CONSTRUCTION	NOTES	BLOWS PER 6" OF SPOON & PID READINGS	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)	DEPTH IN FEET
0		ROAD BOX			0
1		LOCKING WELL CAP	0'-0.5'	Damp, brown, medium GRAVEL with silt and a little clay, no odor.	1
2		BENTONITE	0 ppm	Damp, gray, fine SAND with silt and some clay, no odor.	2
3		WELL RISER	0.5'-4'	3.0' WATER TABLE	3
4		NATIVE BACKFILL	0 ppm		4
5		WELL SCREEN		Damp, gray, dense CLAY.	5
6		BOTTOM CAP			6
7			4'-11'		7
8			0 ppm		8
9					9
10					10
11		UNDISTURBED NATIVE SOIL		BASE OF WELL AT 7'	11
12				END OF EXPLORATION AT 11'	12
13					13
14					14
15					15
16					16
17					17
18					18
19					19
20					20
21					21
22					22
23					23
24					24
25					25

PROJECT GIROUX BODY SHOP INC.

LOCATION ROUTE 116, HINESBURG, VT.

DATE DRILLED 11/16/98 TOTAL DEPTH OF HOLE 10.0'

DIAMETER 2.75"

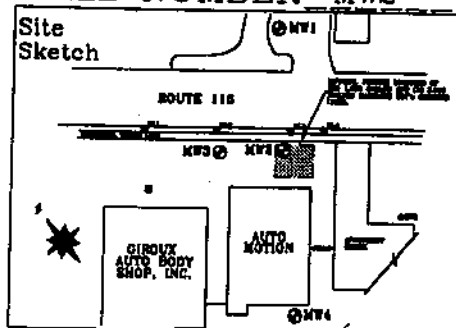
SCREEN DIA. 1.5" LENGTH 7.7' SLOT SIZE 0.010"

CASING DIA. 1.5" LENGTH 1.5' TYPE sch 40 pvc

DRILLING CO. ADAMS ENGR. DRILLING METHOD VIBRATORY

DRILLER GERRY ADAMS LOG BY R. HIGGINS

WELL NUMBER MW2



GRIFFIN INTERNATIONAL, INC

DEPTH IN FEET	WELL CONSTRUCTION	NOTES	BLOWS PER 6" OF SPOON & PID READINGS	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)	DEPTH IN FEET
0		ROAD BOX			0
1		LOCKING WELL CAP			1
2		CONCRETE			2
3		BENTONITE			3
4		WELL RISER			4
5		SAND PACK			5
6		WELL SCREEN			6
7		BOTTOM CAP			7
8		UNDISTURBED			8
9		NATIVE SOIL			9
10					10
11					11
12					12
13					13
14					14
15					15
16					16
17					17
18					18
19					19
20					20
21					21
22					22
23					23
24					24
25					25

PROJECT GIROUX BODY SHOP INC.

LOCATION ROUTE 116, HINESBURG, VT.

DATE DRILLED 11/16/98 TOTAL DEPTH OF HOLE 10.0'

DIAMETER 2.75"

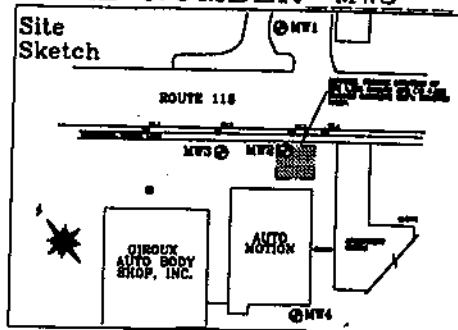
SCREEN DIA. 1.5" LENGTH 7.5' SLOT SIZE 0.010"

CASING DIA. 1.5" LENGTH 1.5' TYPE sch 40 pvc

DRILLING CO. ADAMS ENGR. DRILLING METHOD VIBRATORY

DRILLER GERRY ADAMS LOG BY R. HIGGINS

WELL NUMBER MW3



GRIFFIN INTERNATIONAL, INC

DEPTH IN FEET	WELL CONSTRUCTION	NOTES	BLOWS PER 6" OF SPOON & PID READINGS	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)	DEPTH IN FEET
0	ROAD BOX	LOCKING WELL CAP			0
1	CONCRETE			Dry, brown, fine GRAVEL and coarse SAND, no odor.	1
2	BENTONITE			Damp, black SILT with fine SAND and some clay, petroleum odor.	2
3	WELL RISER		0'-1.5' 0 ppm		3
4			3' 389 ppm	3.5' WATER TABLE	4
5	SAND PACK		4.0' 1383 ppm		5
6			5.0' 358 ppm	Wet, gray, SILT with clay, petroleum odor.	6
7	WELL SCREEN		6' 1145 ppm		7
8			8' 408 ppm	Wet, gray, SILT with clay, petroleum odor.	8
9	BOTTOM CAP				9
10	UNDISTURBED NATIVE SOIL			BASE OF WELL AT 9.5' END OF EXPLORATION AT 10'	10
11					11
12					12
13					13
14					14
15					15
16					16
17					17
18					18
19					19
20					20
21					21
22					22
23					23
24					24
25					25

PROJECT GIROUX BODY SHOP INC.

LOCATION ROUTE 116, HINESBURG, VT.

DATE DRILLED 11/16/98 TOTAL DEPTH OF HOLE 13.0'

DIAMETER 2.75"

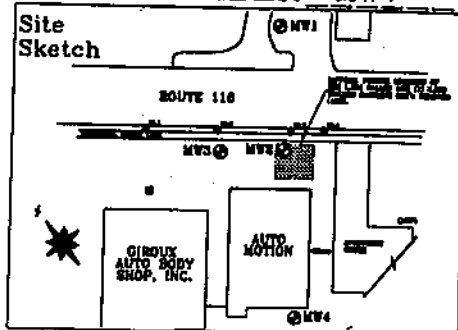
SCREEN DIA. 1.5" LENGTH 10.0' SLOT SIZE 0.010"

CASING DIA. 1.5" LENGTH 2.0' TYPE sch 40 pvc

DRILLING CO. ADAMS ENGR. DRILLING METHOD VIBRATORY

DRILLER GERRY ADAMS LOG BY R. HIGGINS

WELL NUMBER MW4



GRIFFIN INTERNATIONAL, INC

DEPTH IN FEET	WELL CONSTRUCTION	NOTES	BLOWS PER 6" OF SPOON & PID READINGS	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)	DEPTH IN FEET
0		ROAD BOX			0
1		LOCKING WELL CAP			1
2		CONCRETE		Dry, brown, fine GRAVEL with coarse sand, no odor.	2
3		BENTONITE	0'-2.2' 1.5 ppm	Damp, black CLAY with some silt, no odor.	3
4		WELL RISER	2.2'-3.2' 0 ppm	Wet, gray, fine SILT with fine sand and little clay, no odor.	4
5			3.2'-4' 0 ppm	5.0' WATER TABLE	5
6		SAND PACK	4'-7' 0 ppm	Damp, hard, gray CLAY.	6
7				Wet, plastic, gray CLAY, no odor.	7
8		WELL SCREEN			8
9					9
10			7'-13' 0 ppm		10
11		BOTTOM CAP			11
12		UNDISTURBED NATIVE SOIL			12
13				BASE OF WELL AT 12.5' END OF EXPLORATION AT 13'	13
14					14
15					15
16					16
17					17
18					18
19					19
20					20
21					21
22					22
23					23
24					24
25					25

APPENDIX C

Liquid Level Monitoring Data

Liquid Level Monitoring Data
Giroux Auto Body, Inc.
Hinesburg, VT

Monitoring Date: 11/25/98

Well I.D.	Top of Casing Elevation	Depth To Product	Depth To Water	Product Thickness	Specific Gravity Of Product	Hydro Equivalent	Corrected Depth To Water	Corrected Water Table Elevation
MW1	101.40	-	1.21	-	-	-	1.21	100.19
MW2	101.22	-	2.48	-	-	-	2.48	98.74
MW3	100.00	-	2.22	-	-	-	2.22	97.78
MW4	99.06	-	2.49	-	-	-	2.49	96.57

nm - not measured

All values reported in feet

APPENDIX D

Groundwater Quality Summary Data

Groundwater Quality Summary
Giroux Auto Body Inc.
Hinesburg, VT

PARAMETER	Sample Date: November 25, 1998						
	MW1	MW2	MW3	MW4	SW1	VGES	EPA
Benzene	ND(1)	230.	124.	ND(1)	ND(1)	5	0.36
n-Butylbenzene	ND(1)	TBQ(100)	TBQ(100)	ND(1)	ND(1)	ns	61
sec-Butylbenzene	ND(1)	ND(100)	TBQ(100)	ND(1)	ND(1)	ns	61
Chloroform	ND(1)	ND(100)	ND(100)	ND(1)	ND(1)	6	0.15
Ethylbenzene	ND(1)	3,340.	4,170.	ND(1)	ND(1)	700	1,300
Isopropylbenzene	ND(1)	242.	231.	ND(1)	ND(1)	ns	ns
p-Isopropyltoluene	ND(1)	TBQ(100)	TBQ(100)	ND(1)	ND(1)	ns	ns
Napthalene	ND(5)	616.	1,170.	ND(5)	ND(5)	20	ns
n-Propylbenzene	ND(1)	540.	658.	ND(1)	ND(1)	ns	61
Toluene	ND(1)	14,600.	4,630.	ND(1)	ND(1)	1,000	750
1,2,4 Trimethylbenzene	ND(1)	3,970.	4,560.	ND(1)	ND(1)	5	12
1,3,5 Trimethylbenzene	ND(1)	1,190.	1,320.	ND(1)	ND(1)	4	12
Xylenes	ND(2)	17,200.	19,100.	ND(2)	ND(2)	10,000	12,000
Total VOCs	ND	41,928.	35,963.	ND	ND		

Analysis by EPA Method 8260

ND() = Not detected (detection limit)

TBQ() = Trace below quantitation limit (detection limit)

VGES = Vermont Groundwater Enforcement Standards (Vermont Groundwater Protection Rule and Strategy, 11/15/97)

EPA = Environmental Protection Agency Region III Risk-Based Concentrations for tap water (EPA, 10/22/97)

All concentrations shown in ug/L (ppm)

ns = no applicable standard

Only detected compounds are shown

Groundwater Quality Summary
Giroux Auto Body Inc.
Hinesburg, VT

PARAMETER	Monitoring Well 1						
	11/25/98					VGES	EPA
Benzene	ND(1)					5	0.36
n-Butylbenzene	ND(1)					ns	61
sec-Butylbenzene	ND(1)					ns	61
Chloroform	ND(1)					6	0.15
Ethylbenzene	ND(1)					700	1,300
Isopropylbenzene	ND(1)					ns	ns
p-Isopropyltoluene	ND(1)					ns	ns
Napthalene	ND(5)					20	ns
n-Propylbenzene	ND(1)					ns	61
Toluene	ND(1)					1,000	750
1,2,4 Trimethylbenzene	ND(1)					5	12
1,3,5 Trimethylbenzene	ND(1)					4	12
Xylenes	ND(2)					10,000	12,000
Total VOCs	ND						

PARAMETER	Monitoring Well 2						
	11/25/98					VGES	EPA
Benzene	230.					5	0.36
n-Butylbenzene	TBQ(100)					ns	61
sec-Butylbenzene	ND(100)					ns	61
Chloroform	ND(100)					6	0.15
Ethylbenzene	3,340.					700	1,300
Isopropylbenzene	242.					ns	ns
p-Isopropyltoluene	TBQ(100)					ns	ns
Napthalene	616.					20	ns
n-Propylbenzene	540.					ns	61
Toluene	14,600.					1,000	750
1,2,4 Trimethylbenzene	3,970.					5	12
1,3,5 Trimethylbenzene	1,190.					4	12
Xylenes	17,200.					10,000	12,000
Total VOCs	41,928.						

Analysis by EPA Method 8260

ND() = Not detected (detection limit)

TBQ() = Trace below quantitation limit (detection limit)

VGES = Vermont Groundwater Enforcement Standards (Vermont Groundwater Protection Rule and Strategy, 11/15/97)

EPA = Environmental Protection Agency Region III Risk-Based Concentrations for tap water (EPA, 10/22/97)

All concentrations shown in ug/L (ppm)

ns = no applicable standard

Only detected compounds are shown

Groundwater Quality Summary
Giroux Auto Body Inc.
Hinesburg, VT

PARAMETER	Monitoring Well 3						
	11/25/98					VGES	EPA
Benzene	124.					5	0.36
n-Butylbenzene	TBQ(100)					ns	61
sec-Butylbenzene	TBQ(100)					ns	61
Chloroform	ND(100)					6	0.15
Ethylbenzene	4,170.					700	1,300
Isopropylbenzene	231.					ns	ns
p-Isopropyltoluene	TBQ(100)					ns	ns
Napthalene	1,170.					20	ns
n-Propylbenzene	658.					ns	61
Toluene	4,630.					1,000	750
1,2,4 Trimethylbenzene	4,560.					5	12
1,3,5 Trimethylbenzene	1,320.					4	12
Xylenes	19,100.					10,000	12,000
Total VOCs	35,963.						

PARAMETER	Monitoring Well 4						
	11/25/98					VGES	EPA
Benzene	ND(1)					5	0.36
n-Butylbenzene	ND(1)					ns	61
sec-Butylbenzene	ND(1)					ns	61
Chloroform	ND(1)					6	0.15
Ethylbenzene	ND(1)					700	1,300
Isopropylbenzene	ND(1)					ns	ns
p-Isopropyltoluene	ND(1)					ns	ns
Napthalene	ND(5)					20	ns
n-Propylbenzene	ND(1)					ns	61
Toluene	ND(1)					1,000	750
1,2,4 Trimethylbenzene	ND(1)					5	12
1,3,5 Trimethylbenzene	ND(1)					4	12
Xylenes	ND(2)					10,000	12,000
Total VOCs	ND						

Analysis by EPA Method 8260

ND() = Not detected (detection limit)

TBQ() = Trace below quantitation limit (detection limit)

VGES = Vermont Groundwater Enforcement Standards (Vermont Groundwater Protection Rule and Strategy, 11/15/97)

EPA = Environmental Protection Agency Region III Risk-Based Concentrations for tap water (EPA, 10/22/97)

All concentrations shown in ug/L (ppm)

ns = no applicable standard

Only detected compounds are shown

Groundwater Quality Summary
Giroux Auto Body Inc.
Hinesburg, VT

PARAMETER	Supply Well 1						VGES	EPA
	11/25/98							
Benzene	ND(1)						5	0.36
n-Butylbenzene	ND(1)						ns	61
sec-Butylbenzene	ND(1)						ns	61
Chloroform	ND(1)						6	0.15
Ethylbenzene	ND(1)						700	1,300
Isopropylbenzene	ND(1)						ns	ns
p-Isopropyltoluene	ND(1)						ns	ns
Napthalene	ND(5)						20	ns
n-Propylbenzene	ND(1)						ns	61
Toluene	ND(1)						1,000	750
1,2,4 Trimethylbenzene	ND(1)						5	12
1,3,5 Trimethylbenzene	ND(1)						4	12
Xylenes	ND(2)						10,000	12,000
Total VOCs	ND							

Analysis by EPA Method 8260

ND() = Not detected (detection limit)

TBQ() = Trace below quantitation limit (detection limit)

VGES = Vermont Groundwater Enforcement Standards (Vermont Groundwater Protection Rule and Strategy, 11/15/97)

EPA = Environmental Protection Agency Region III Risk-Based Concentrations for tap water (EPA, 10/22/97)

All concentrations shown in ug/L (ppm)

ns = no applicable standard

Only detected compounds are shown

Groundwater Quality Summary
Giroux Auto Body Inc.
Hinesburg, VT

PARAMETER	Quality Assurance/Quality Control Samples			
	11/25/98			
	Trip Blank	Duplicate MW-4	VGES	EPA
Benzene	ND(1)	ND(1)	5	0.36
n-Butylbenzene	ND(1)	ND(1)	ns	61
sec-Butylbenzene	ND(1)	ND(1)	ns	61
Chloroform	1.2	ND(1)	ns	0.15
Ethylbenzene	ND(1)	ND(1)	700	1,300
Isopropylbenzene	ND(1)	ND(1)	ns	ns
p-Isopropyltoluene	ND(1)	ND(1)	ns	ns
Napthalene	ND(5)	ND(5)	20	ns
n-Propylbenzene	ND(1)	ND(1)	ns	61
Toluene	ND(1)	ND(1)	1,000	750
1,2,4 Trimethylbenzene	ND(1)	ND(1)	5	12
1,3,5 Trimethylbenzene	ND(1)	ND(1)	4	12
Xylenes	ND(2)	ND(2)	10,000	12,000
Total VOCs	ND	ND		

Analysis by EPA Method 8260

ND() = Not detected (detection limit)

TBQ() = Trace below quantitation limit (detection limit)

All concentrations shown in ug/L (ppm)

ns = no applicable standard

Only detected compounds are shown

VGES = Vermont Groundwater Enforcement Standards (Vermont Groundwater Protection Rule and Strategy, 11/15/97)

EPA = Environmental Protection Agency Region III Risk-Based Concentrations for tap water (EPA, 10/22/97)

APPENDIX E

Laboratory Analysis Reports



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

REPORT OF LABORATORY ANALYSIS

CLIENT: Griffin International
PROJECT NAME: Giroux Auto Body/109841393
REPORT DATE: December 7, 1998
DATE SAMPLED: November 25, 1998

PROJECT CODE: GIGA1797
REF. #: 131,919 - 131,923B

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody.

Chain of custody indicated sample preservation with HCl.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy were monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate recovery data was determined to be within Laboratory QA/QC guidelines unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Griffin International
PROJECT NAME: Giroux Auto Body/109841393
REPORT DATE: December 7, 1998
DATE SAMPLED: November 25, 1998
DATE RECEIVED: November 30, 1998
ANALYSIS DATE: December 4, 1998

PROJECT CODE: GIGA1797
REF.#: 131,923A
STATION: MW #1
TIME SAMPLED: 10:42
SAMPLER: Don Tourangeau

Parameter	Detection Limit (ug/L)	Result (ug/L)	Parameter	Detection Limit (ug/L)	Result (ug/L)
Benzene	1	ND ¹	1,3-Dichloropropane	1	ND
Bromobenzene	1	ND	2,2-Dichloropropane	1	ND
Bromochloromethane	2	ND	1,1-Dichloropropene	1	ND
Bromodichloromethane	1	ND	cis-1,3-Dichloropropene	1	ND
Bromoform	1	ND	trans-1,3-Dichloropropene	1	ND
Bromomethane	5	ND	Ethylbenzene	1	ND
n-Butylbenzene	1	ND	Hexachlorobutadiene	5	ND
sec-Butylbenzene	1	ND	Isopropylbenzene	1	ND
tert-Butylbenzene	1	ND	p-Isopropyltoluene	1	ND
Carbon Tetrachloride	1	ND	Methylene Chloride	5	ND
Chlorobenzene	1	ND	Naphthalene	5	ND
Chloroethane	5	ND	n-Propylbenzene	1	ND
Chloroform	1	ND	Styrene	1	ND
Chloromethane	10	ND	1,1,1,2-Tetrachloroethane	2	ND
2&4-Chlorotoluene	2	ND	1,1,2,2-Tetrachloroethane	2	ND
Dibromochloromethane	1	ND	Tetrachloroethene	1	ND
1,2-Dibromo-3-Chloropropane	2	ND	Toluene	1	ND
1,2-Dibromoethane	2	ND	1,2,3-Trichlorobenzene	2	ND
Dibromomethane	2	ND	1,2,4-Trichlorobenzene	2	ND
1,2-Dichlorobenzene	1	ND	1,1,1-Trichloroethane	1	ND
1,3-Dichlorobenzene	1	ND	1,1,2-Trichloroethane	1	ND
1,4-Dichlorobenzene	1	ND	Trichloroethene	1	ND
Dichlorodifluoromethane	10	ND	Trichlorofluoromethane	2	ND
1,1-Dichloroethane	1	ND	1,2,3-Trichloropropane	1	ND
1,2-Dichloroethane	1	ND	1,2,4-Trimethylbenzene	1	ND
1,1-Dichloroethene	1	ND	1,3,5-Trimethylbenzene	1	ND
cis-1,2-Dichloroethene	1	ND	Vinyl Chloride	5	ND
trans-1,2-Dichloroethene	1	ND	Total Xylenes	2	ND
1,2-Dichloropropane	1	ND	MTBE	2	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 100.%

Toluene-d8 : 101.%

4-Bromofluorobenzene : 97.%

NOTES:

1 None detected



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Griffin International
PROJECT NAME: Giroux Auto Body/109841393
REPORT DATE: December 7, 1998
DATE SAMPLED: November 25, 1998
DATE RECEIVED: November 30, 1998
ANALYSIS DATE: December 4, 1998

PROJECT CODE: GIGA1797
REF.#: 131,923
STATION: MW #2
TIME SAMPLED: 10:26
SAMPLER: Don Tourangeau

Parameter	Detection Limit (ug/L) ¹	Result (ug/L)	Parameter	Detection Limit (ug/L)	Result (ug/L)
Benzene	100	230.	1,3-Dichloropropane	100	ND
Bromobenzene	100	ND ²	2,2-Dichloropropane	100	ND
Bromochloromethane	200	ND	1,1-Dichloropropene	100	ND
Bromodichloromethane	100	ND	cis-1,3-Dichloropropene	100	ND
Bromoform	100	ND	trans-1,3-Dichloropropene	100	ND
Bromomethane	500	ND	Ethylbenzene	100	3,340.
n-Butylbenzene	100	TBQ ³	Hexachlorobutadiene	500	ND
sec-Butylbenzene	100	ND	Isopropylbenzene	100	242.
tert-Butylbenzene	100	ND	p-Isopropyltoluene	100	TBQ
Carbon Tetrachloride	100	ND	Methylene Chloride	500	ND
Chlorobenzene	100	ND	Naphthalene	500	616.
Chloroethane	500	ND	n-Propylbenzene	100	540.
Chloroform	100	ND	Styrene	100	ND
Chloromethane	1,000	ND	1,1,1,2-Tetrachloroethane	200	ND
2&4-Chlorotoluene	200	ND	1,1,2,2-Tetrachloroethane	200	ND
Dibromochloromethane	100	ND	Tetrachloroethene	100	ND
1,2-Dibromo-3-Chloropropane	200	ND	Toluene	100	14,600.
1,2-Dibromoethane	200	ND	1,2,3-Trichlorobenzene	200	ND
Dibromomethane	200	ND	1,2,4-Trichlorobenzene	200	ND
1,2-Dichlorobenzene	100	ND	1,1,1-Trichloroethane	100	ND
1,3-Dichlorobenzene	100	ND	1,1,2-Trichloroethane	100	ND
1,4-Dichlorobenzene	100	ND	Trichloroethene	100	ND
Dichlorodifluoromethane	1,000	ND	Trichlorofluoromethane	200	ND
1,1-Dichloroethane	100	ND	1,2,3-Trichloropropane	100	ND
1,2-Dichloroethane	100	ND	1,2,4-Trimethylbenzene	100	3,970.
1,1-Dichloroethene	100	ND	1,3,5-Trimethylbenzene	100	1,190.
cis-1,2-Dichloroethene	100	ND	Vinyl Chloride	500	ND
trans-1,2-Dichloroethene	100	ND	Total Xylenes	200	17,200.
1,2-Dichloropropane	100	ND	MTBE	200	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 97.%
Toluene-d8 : 102.%
4-Bromofluorobenzene : 96.%

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at a 1% dilution.
- 2 None detected
- 3 Trace below quantitation limit



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Griffin International
PROJECT NAME: Giroux Auto Body/109841393
REPORT DATE: December 7, 1998
DATE SAMPLED: November 25, 1998
DATE RECEIVED: November 30, 1998
ANALYSIS DATE: December 4, 1998

PROJECT CODE: GIGA1797
REF.#: 131,922
STATION: MW #3
TIME SAMPLED: 10:07
SAMPLER: Don Tourangeau

Parameter	Detection Limit (ug/L) ¹	Result (ug/L)	Parameter	Detection Limit (ug/L)	Result (ug/L)
Benzene	100	124.	1,3-Dichloropropane	100	ND
Bromobenzene	100	ND ²	2,2-Dichloropropane	100	ND
Bromochloromethane	200	ND	1,1-Dichloropropene	100	ND
Bromodichloromethane	100	ND	cis-1,3-Dichloropropene	100	ND
Bromoform	100	ND	trans-1,3-Dichloropropene	100	ND
Bromomethane	500	ND	Ethylbenzene	100	4,170.
n-Butylbenzene	100	TBQ ³	Hexachlorobutadiene	500	ND
sec-Butylbenzene	100	TBQ	Isopropylbenzene	100	231.
tert-Butylbenzene	100	ND	p-Isopropyltoluene	100	TBQ
Carbon Tetrachloride	100	ND	Methylene Chloride	500	ND
Chlorobenzene	100	ND	Naphthalene	500	1,170.
Chloroethane	500	ND	n-Propylbenzene	100	658.
Chloroform	100	ND	Styrene	100	ND
Chloromethane	1,000	ND	1,1,1,2-Tetrachloroethane	200	ND
2&4-Chlorotoluene	200	ND	1,1,2,2-Tetrachloroethane	200	ND
Dibromochloromethane	100	ND	Tetrachloroethene	100	ND
1,2-Dibromo-3-Chloropropane	200	ND	Toluene	100	4,630.
1,2-Dibromoethane	200	ND	1,2,3-Trichlorobenzene	200	ND
Dibromomethane	200	ND	1,2,4-Trichlorobenzene	200	ND
1,2-Dichlorobenzene	100	ND	1,1,1-Trichloroethane	100	ND
1,3-Dichlorobenzene	100	ND	1,1,2-Trichloroethane	100	ND
1,4-Dichlorobenzene	100	ND	Trichloroethene	100	ND
Dichlorodifluoromethane	1,000	ND	Trichlorofluoromethane	200	ND
1,1-Dichloroethane	100	ND	1,2,3-Trichloropropane	100	ND
1,2-Dichloroethane	100	ND	1,2,4-Trimethylbenzene	100	4,560.
1,1-Dichloroethene	100	ND	1,3,5-Trimethylbenzene	100	1,320.
cis-1,2-Dichloroethene	100	ND	Vinyl Chloride	500	ND
trans-1,2-Dichloroethene	100	ND	Total Xylenes	200	19,100.
1,2-Dichloropropane	100	ND	MTBE	200	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 97. %
Toluene-d8 : 93. %
4-Bromofluorobenzene : 96. %

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at a 1% dilution.
- 2 None detected
- 3 Trace below quantitation limit



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Griffin International
PROJECT NAME: Giroux Auto Body/109841393
REPORT DATE: December 7, 1998
DATE SAMPLED: November 25, 1998
DATE RECEIVED: November 30, 1998
ANALYSIS DATE: December 4, 1998

PROJECT CODE: GIGA1797
REF.#: 131,920
STATION: MW #4
TIME SAMPLED: 9:35
SAMPLER: Don Tourangeau

Parameter	Detection Limit (ug/L)	Result (ug/L)	Parameter	Detection Limit (ug/L)	Result (ug/L)
Benzene	1	ND ¹	1,3-Dichloropropane	1	ND
Bromobenzene	1	ND	2,2-Dichloropropane	1	ND
Bromochloromethane	2	ND	1,1-Dichloropropene	1	ND
Bromodichloromethane	1	ND	cis-1,3-Dichloropropene	1	ND
Bromoform	1	ND	trans-1,3-Dichloropropene	1	ND
Bromomethane	5	ND	Ethylbenzene	1	ND
n-Butylbenzene	1	ND	Hexachlorobutadiene	5	ND
sec-Butylbenzene	1	ND	Isopropylbenzene	1	ND
tert-Butylbenzene	1	ND	p-Isopropyltoluene	1	ND
Carbon Tetrachloride	1	ND	Methylene Chloride	5	ND
Chlorobenzene	1	ND	Naphthalene	5	ND
Chloroethane	5	ND	n-Propylbenzene	1	ND
Chloroform	1	ND	Styrene	1	ND
Chloromethane	10	ND	1,1,1,2-Tetrachloroethane	2	ND
2&4-Chlorotoluene	2	ND	1,1,2,2-Tetrachloroethane	2	ND
Dibromochloromethane	1	ND	Tetrachloroethene	1	ND
1,2-Dibromo-3-Chloropropane	2	ND	Toluene	1	ND
1,2-Dibromoethane	2	ND	1,2,3-Trichlorobenzene	2	ND
Dibromomethane	2	ND	1,2,4-Trichlorobenzene	2	ND
1,2-Dichlorobenzene	1	ND	1,1,1-Trichloroethane	1	ND
1,3-Dichlorobenzene	1	ND	1,1,2-Trichloroethane	1	ND
1,4-Dichlorobenzene	1	ND	Trichloroethene	1	ND
Dichlorodifluoromethane	10	ND	Trichlorofluoromethane	2	ND
1,1-Dichloroethane	1	ND	1,2,3-Trichloropropane	1	ND
1,2-Dichloroethane	1	ND	1,2,4-Trimethylbenzene	1	ND
1,1-Dichloroethene	1	ND	1,3,5-Trimethylbenzene	1	ND
cis-1,2-Dichloroethene	1	ND	Vinyl Chloride	5	ND
trans-1,2-Dichloroethene	1	ND	Total Xylenes	2	ND
1,2-Dichloropropane	1	ND	MTBE	2	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 98. %
Toluene-d8 : 91. %
4-Bromofluorobenzene : 95. %

NOTES:

1 None detected



ENDYNE, INC.

Laboratory Services

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LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Griffin International
PROJECT NAME: Giroux Auto Body/109841393
REPORT DATE: December 7, 1998
DATE SAMPLED: November 25, 1998
DATE RECEIVED: November 30, 1998
ANALYSIS DATE: December 4, 1998

PROJECT CODE: GIGA1797
REF.#: 131,923B
STATION: Supply Well
TIME SAMPLED: 10:55
SAMPLER: Don Tourangeau

Parameter	Detection Limit (ug/L)	Result (ug/L)	Parameter	Detection Limit (ug/L)	Result (ug/L)
Benzene	1	ND ¹	1,3-Dichloropropane	1	ND
Bromobenzene	1	ND	2,2-Dichloropropane	1	ND
Bromochloromethane	2	ND	1,1-Dichloropropene	1	ND
Bromodichloromethane	1	ND	cis-1,3-Dichloropropene	1	ND
Bromoform	1	ND	trans-1,3-Dichloropropene	1	ND
Bromomethane	5	ND	Ethylbenzene	1	ND
n-Butylbenzene	1	ND	Hexachlorobutadiene	5	ND
sec-Butylbenzene	1	ND	Isopropylbenzene	1	ND
tert-Butylbenzene	1	ND	p-Isopropyltoluene	1	ND
Carbon Tetrachloride	1	ND	Methylene Chloride	5	ND
Chlorobenzene	1	ND	Naphthalene	5	ND
Chloroethane	5	ND	n-Propylbenzene	1	ND
Chloroform	1	ND	Styrene	1	ND
Chloromethane	10	ND	1,1,1,2-Tetrachloroethane	2	ND
2&4-Chlorotoluene	2	ND	1,1,2,2-Tetrachloroethane	2	ND
Dibromochloromethane	1	ND	Tetrachloroethene	1	ND
1,2-Dibromo-3-Chloropropane	2	ND	Toluene	1	ND
1,2-Dibromoethane	2	ND	1,2,3-Trichlorobenzene	2	ND
Dibromomethane	2	ND	1,2,4-Trichlorobenzene	2	ND
1,2-Dichlorobenzene	1	ND	1,1,1-Trichloroethane	1	ND
1,3-Dichlorobenzene	1	ND	1,1,2-Trichloroethane	1	ND
1,4-Dichlorobenzene	1	ND	Trichloroethene	1	ND
Dichlorodifluoromethane	10	ND	Trichlorofluoromethane	2	ND
1,1-Dichloroethane	1	ND	1,2,3-Trichloropropane	1	ND
1,2-Dichloroethane	1	ND	1,2,4-Trimethylbenzene	1	ND
1,1-Dichloroethene	1	ND	1,3,5-Trimethylbenzene	1	ND
cis-1,2-Dichloroethene	1	ND	Vinyl Chloride	5	ND
trans-1,2-Dichloroethene	1	ND	Total Xylenes	2	ND
1,2-Dichloropropane	1	ND	MTBE	2	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 100. %
Toluene-d8 : 90. %
4-Bromofluorobenzene : 96. %

NOTES:

1 None detected



ENDYNE, INC.

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LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Griffin International
PROJECT NAME: Giroux Auto Body/109841393
REPORT DATE: December 7, 1998
DATE SAMPLED: November 25, 1998
DATE RECEIVED: November 30, 1998
ANALYSIS DATE: December 4, 1998

PROJECT CODE: GIGA1797
REF.#: 131,919
STATION: Trip Blank
TIME SAMPLED: 8:04
SAMPLER: Don Tourangeau

Parameter	Detection Limit (ug/L)	Result (ug/L)	Parameter	Detection Limit (ug/L)	Result (ug/L)
Benzene	1	ND ¹	1,3-Dichloropropane	1	ND
Bromobenzene	1	ND	2,2-Dichloropropane	1	ND
Bromochloromethane	2	ND	1,1-Dichloropropene	1	ND
Bromodichloromethane	1	ND	cis-1,3-Dichloropropene	1	ND
Bromoform	1	ND	trans-1,3-Dichloropropene	1	ND
Bromomethane	5	ND	Ethylbenzene	1	ND
n-Butylbenzene	1	ND	Hexachlorobutadiene	5	ND
sec-Butylbenzene	1	ND	Isopropylbenzene	1	ND
tert-Butylbenzene	1	ND	p-Isopropyltoluene	1	ND
Carbon Tetrachloride	1	ND	Methylene Chloride	5	ND
Chlorobenzene	1	ND	Naphthalene	5	ND
Chloroethane	5	ND	n-Propylbenzene	1	ND
Chloroform	1	1.2	Styrene	1	ND
Chloromethane	10	ND	1,1,1,2-Tetrachloroethane	2	ND
2&4-Chlorotoluene	2	ND	1,1,2,2-Tetrachloroethane	2	ND
Dibromochloromethane	1	ND	Tetrachloroethene	1	ND
1,2-Dibromo-3-Chloropropane	2	ND	Toluene	1	ND
1,2-Dibromoethane	2	ND	1,2,3-Trichlorobenzene	2	ND
Dibromomethane	2	ND	1,2,4-Trichlorobenzene	2	ND
1,2-Dichlorobenzene	1	ND	1,1,1-Trichloroethane	1	ND
1,3-Dichlorobenzene	1	ND	1,1,2-Trichloroethane	1	ND
1,4-Dichlorobenzene	1	ND	Trichloroethene	1	ND
Dichlorodifluoromethane	10	ND	Trichlorofluoromethane	2	ND
1,1-Dichloroethane	1	ND	1,2,3-Trichloropropane	1	ND
1,2-Dichloroethane	1	ND	1,2,4-Trimethylbenzene	1	ND
1,1-Dichloroethene	1	ND	1,3,5-Trimethylbenzene	1	ND
cis-1,2-Dichloroethene	1	ND	Vinyl Chloride	5	ND
trans-1,2-Dichloroethene	1	ND	Total Xylenes	2	ND
1,2-Dichloropropane	1	ND	MTBE	2	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 98. %
Toluene-d8 : 90. %
4-Bromofluorobenzene : 96. %

NOTES:

1 None detected



ENDYNE, INC.

Laboratory Services

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LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Griffin International
PROJECT NAME: Giroux Auto Body/109841393
REPORT DATE: December 7, 1998
DATE SAMPLED: November 25, 1998
DATE RECEIVED: November 30, 1998
ANALYSIS DATE: December 4, 1998

PROJECT CODE: GIGA1797
REF.#: 131,921
STATION: Duplicate
TIME SAMPLED: 9:35
SAMPLER: Don Tourangeau

Parameter	Detection Limit (ug/L)	Result (ug/L)	Parameter	Detection Limit (ug/L)	Result (ug/L)
Benzene	1	ND ¹	1,3-Dichloropropane	1	ND
Bromobenzene	1	ND	2,2-Dichloropropane	1	ND
Bromochloromethane	2	ND	1,1-Dichloropropene	1	ND
Bromodichloromethane	1	ND	cis-1,3-Dichloropropene	1	ND
Bromoform	1	ND	trans-1,3-Dichloropropene	1	ND
Bromomethane	5	ND	Ethylbenzene	1	ND
n-Butylbenzene	1	ND	Hexachlorobutadiene	5	ND
sec-Butylbenzene	1	ND	Isopropylbenzene	1	ND
tert-Butylbenzene	1	ND	p-Isopropyltoluene	1	ND
Carbon Tetrachloride	1	ND	Methylene Chloride	5	ND
Chlorobenzene	1	ND	Naphthalene	5	ND
Chloroethane	5	ND	n-Propylbenzene	1	ND
Chloroform	1	ND	Styrene	1	ND
Chloromethane	10	ND	1,1,1,2-Tetrachloroethane	2	ND
2&4-Chlorotoluene	2	ND	1,1,2,2-Tetrachloroethane	2	ND
Dibromochloromethane	1	ND	Tetrachloroethene	1	ND
1,2-Dibromo-3-Chloropropane	2	ND	Toluene	1	ND
1,2-Dibromoethane	2	ND	1,2,3-Trichlorobenzene	2	ND
Dibromomethane	2	ND	1,2,4-Trichlorobenzene	2	ND
1,2-Dichlorobenzene	1	ND	1,1,1-Trichloroethane	1	ND
1,3-Dichlorobenzene	1	ND	1,1,2-Trichloroethane	1	ND
1,4-Dichlorobenzene	1	ND	Trichloroethene	1	ND
Dichlorodifluoromethane	10	ND	Trichlorofluoromethane	2	ND
1,1-Dichloroethane	1	ND	1,2,3-Trichloropropane	1	ND
1,2-Dichloroethane	1	ND	1,2,4-Trimethylbenzene	1	ND
1,1-Dichloroethene	1	ND	1,3,5-Trimethylbenzene	1	ND
cis-1,2-Dichloroethene	1	ND	Vinyl Chloride	5	ND
trans-1,2-Dichloroethene	1	ND	Total Xylenes	2	ND
1,2-Dichloropropane	1	ND	MTBE	2	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 99.%
Toluene-d8 : 110.%
4-Bromofluorobenzene : 95.%

NOTES:

1 None detected



32 James Brown Drive
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(602) 879-4333

109841393

CHAIN-OF-CUSTODY RECORD

31504

Project Name: GIRONX AUTO BODY Site Location: HINESBURG	Reporting Address: GRIFFIN	Billing Address: GRIFFIN
Endyne Project Number: GIGA1797	Company: Contact Name/Phone #: ROB HIGGINS	Sampler Name: Phone #: DON TOURANGELO

[illegible]

Relinquished by: Signature <i>[Signature]</i>	Received by: Signature <i>[Signature]</i>	Date/Time 30 NOV 99
Relinquished by: Signature	Received by: Signature	Date/Time

New York State Project: Yes _____ No X

Requested Analyses

[illegible]



CHAIN-OF-CUSTODY RECORD

3:50

107541393

Project Name: <i>GIROUX AUTO BODY</i>	Reporting Address: <i>GIROUX</i>	Billing Address: <i>GIROUX</i>
Site Location: <i>11 NESBURN</i>		
Endyne Project Number:	Company: <i>REB NISSEN'S</i>	Sampler Name: <i>Don Tourmaline</i>
	Contact Name/Phone #:	Phone #:

[illegible]

Relinquished by: Signature <i>D. T. F.</i>	Received by: Signature <i>MTK</i>	Date/Time <i>30 Nov 98</i>
Relinquished by: Signature	Received by: Signature	Date/Time

New York State Project: Yes No ☒

Requested Analyses

[illegible]